

## INFORMATION REPORT INFORMATION REPORT

## CENTRAL INTELLIGENCE AGENCY

This material contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C. Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

~~TOP SECRET~~

25X1

COUNTRY USSR

REPORT

SUBJECT The Soviet Rapid-Action Communications  
Device Biryuza

DATE DISTR. 25 April 1960

NO. PAGES 2

REFERENCES RD

DATE OF  
INFO.PLACE &  
DATE ACQ

25X1

SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

25X1

1. The Biryuza-1 rapid-action communications apparatus was installed in late 1953 or early 1954 on the destroyer SOVERSHENNY

25X1

it was replaced in May 1956 with Biryuza-3. The installation of the Biryuza-3 took place by unit (soyedineniye, chast, etc), so that vessels of a unit could communicate with one another. the different series Biryuza devices are not able to communicate with one another, the transmission time of Biryuza-1 was longer, perhaps by one to two seconds, than that of Biryuza-3. Biryuza-1 and Biryuza-3 had different external appearances. Biryuza-3 also has a greater number of group combinations. a new type of device was to be installed on cruisers it was a further development of Biryuza, such as Biryuza-4.

25X1

2. Practically every city in the Baltic had Biryuza, and communicated with all of them at one time or another. ships of other brigades used Biryuza in communicating Use of Biryuza is officially decided by the skipper, or senior officer present, but actually the decision is left to the communications officer. The location of a ship, i.e., its vulnerability to intercept, is the controlling factor in use of Biryuza. Since a ship exists for war, it must always be operated as though engaged in a war. Biryuza is the preferred method of ship-to-ship communications, but coded communications by Morse are considered quite secure in the Baltic, and Akatsiya is used when a brigade is under way. For shortwave Morse Lira-D, Neptun, and occasionally Uran are used. Biryuza is used primarily to disguise the location of a ship.

25X1

25X1

STATE	X	ARMY	X	NAVY	X	AIR	X	NSA	X	FBI	X	NTC	X	ICB	X
<del>TOP SECRET</del>															
(Note: Washington distribution indicated by "X"; Field distribution by "#").															

25X1

25X1

INFORMATION REPORT INFORMATION REPORT

**TOP SECRET**

-2-

25X1

3. In the Baltic distance did not affect use of Biryuza. However, in principle it becomes very hard to use at the maximum power of the transmitter to which it is connected, over long distances. In practice [redacted] Biryuza at distances of 80 to 100 miles, and 100 to 150 miles shore-to-ship is the longest range over which Biryuza was known to have been used. [redacted] it can be used to communicate between the Baltic and the Arctic, and believes it never has been. Perhaps Biryuza could be used over 400 to 500 miles, [redacted] Biryuza may be used at any time; its use is not scheduled, and it is not necessary to await any sort of signal before initiating a transmission. Biryuza watch is 24 hours. At times Biryuza was actually operated over a 24-hour period; during a day 20, 30, 50, or only 5 messages may have been sent, depending upon the operational circumstances. 25X1
4. The Biryuza system was not intended for transmission of long reports or coded messages, although it was occasionally used for such purposes; it was intended for the operation of a military unit (soyedineniye), with messages consisting, if possible, of one signal. The prime basis for the security of Biryuza transmissions is that the signal, or impulse, is so short, and the impulses can be sent at varying intervals, as determined by the operator. The exact length of a signal is not known [redacted] 27 microseconds is a typical time period for a signal. Each signal consists of ten information parts, so that a message is always ten parts long even if only two parts contain information. [redacted] the Soviet and Western metric systems vary, so that a Soviet second consists of ten milliseconds and a millisecond contains ten microseconds. The term microseconds definitely was used whenever Biryuza transmissions were mentioned. Whether used with Lira-D or Neptun the speed of transmission with Biryuza is the same. The quality of receivers and transmitters used with Biryuza must be very high. 25X1
5. An operator knows that a Biryuza message is for his ship because the call sign lights up on the tableau, and a small bell sounds with each incoming transmission. The message is received at the Biryuza on the bridge at the same time as in the radio room. The older Biryuza signal could be heard when it was received, but the Biryuza-3 signal cannot be heard. The lights for a Biryuza message light up simultaneously. Only one light goes on in each vertical column, but several lights may be on at the same time in the horizontal columns. The physical ability and intelligence of the operators affect the speed of transmissions by Biryuza between vessels. The sender has a considerably harder job in making up signals than the receiving operator has in recording them and the transmission time depends only on the operator's skill in setting up the equipment. The transmitter goes on when Biryuza is activated. The term "otvetchik" (responder) was never used in reference to Biryuza; Biryuza cannot give an answer, as only the operator can send the answer, which he must first compose. 25X1
6. Biryuza has only one channel, and is actually dead until the receiver is open. Amur was a cover name used for the Biryuza channel at one time; if Biryuza was assigned channel 11 for example, it was referred to in communications as Amur-11. These names were changed at least four times a year, and for exercises; another name used to refer to the Biryuza channel during one period was Lastochka, plus the channel number. Biryuza was never called anything but Biryuza. Frequencies are changed once daily, with one frequency for daytime and one for night operations. These frequencies are stipulated in a schedule which is issued monthly by Fleet Headquarters. 25X1

**TOP SECRET**